

## **DOWNLINK SWITCHING MECHANISM FOR A SATELLITE**

### ABSTRACT OF THE DISCLOSURE

A satellite is provided that routes signals on 0 to n channels to any one of M downlink beams. The satellite may include n first-stage switches each corresponding to one of the 0 to n channels, M multiplexing devices each to combine  $n/2$  channels into one output channel, M second-stage switches to receive outputs from said M multiplexing devices and M downlink antenna ports coupled to the M second-stage switches.